AMENDMENTS TO THE CLAIMS

Pursuant to 37 C.F.R. § 1.121 the following listing of claims will replace all prior versions, and listings, of claims in the application.

1. (Withdrawn) A method for making crystal resonators comprising the steps of:

forming a pair of primary electrodes disposed roughly at the center of an AT-cut crystal substrate:

forming a pair of secondary electrodes on said AT-cut crystal substrate, which are formed in a shape surrounding said primary electrodes and are electrically short-circuited;

grounding said secondary electrodes and measuring a frequency of a two-terminal pair circuit, with one of said pair of primary electrodes and said secondary electrodes serving as input terminals and another of said pair of primary electrodes and said secondary electrodes serving as output terminals; and

performing frequency adjustments when there is a difference between a measured frequency and a desired frequency.

2. (Withdrawn) A method for making crystal resonators comprising the steps of:

forming on one main surface of an AT-cut crystal substrate, a cavity, first and second grooves disposed rightward and leftward from said cavity, third and fourth grooves disposed on either outer side of said first and second grooves, and firfth and sixth grooves formed perpendicular to the first and the second groove;

forming a pair of primary electrodes on said AT-cut crystal substrate, which are aligned roughly to the center of said cavity;

forming a pair of secondary electrodes on said AT-cut crystal substrate, which are formed in a shape surrounding said primary electrodes and are electrically short-circuited;

grounding said secondary electrodes;

measuring a frequency of a two terminal pair circuit; and

performing a frequency adjustment if there is a difference between a measured frequency and a desired frequency, an input terminal for said measuring being formed by respectively

connecting a first pair of pad electrodes disposed at positions between said first and third grooves with one of said pair of primary electrodes and said secondary electrodes, and an output terminal for said measuring being formed by respectively connecting a second pair of pad electrodes disposed between said second and fourth grooves with the other of said pair of primary electrodes and said secondary electrodes.

3. (Withdrawn) The method for making crystal resonators as described in claim 2, further comprising:

forming one of said crystal resonators is obtained by dividing along said first, second, fifth, and sixth grooves.

4. (Currently Amended) An AT-cut crystal substrate for forming piezoelectric resonators, said AT-cut crystal substrate having first and second opposing surfaces, and comprising:

first and second ~~a pair of~~ primary electrodes disposed roughly on ~~at~~ the center of each respective opposing surface of said AT-cut crystal substrate; ~~and~~

first and second ~~a pair of~~ secondary electrodes ~~which are~~ formed on each respective opposing surface of said AT-cut crystal substrate in a shape surrounding each of said first and second primary electrodes and are electrically short-circuited; and [[,]]

~~wherein:~~

said first and second said secondary electrodes connected to an electrical ground, ~~are grounded;~~

wherein input measurement terminals ~~for measuring~~ are formed by one of said first and second ~~pair of~~ primary electrodes and a corresponding ~~said~~ secondary electrode ~~electrodes~~, and output measurement terminals ~~for measuring~~ are formed by another of said first and second ~~pair of~~ primary electrodes and ~~said~~ another corresponding secondary electrode ~~electrodes~~, and

wherein said input measurement terminals ~~are~~ disposed leftward from said center of the AT-cut crystal substrate and said output measurement terminals ~~are~~ disposed rightward from said center of the AT-cut crystal substrate.

5. (Previously Presented) An AT-cut crystal substrate for forming piezoelectric resonators, said AT-cut crystal substrate comprising:

a cavity formed on one main surface of said AT-cut crystal substrate;

a pair of primary electrodes aligned roughly to the center of said cavity;

a pair of secondary electrodes, which are, formed in a shape surrounding said primary electrodes and are electrically short-circuited, said secondary electrodes being grounded;

first and second grooves disposed rightward and leftward from said cavity;

third and fourth grooves disposed on either outer side of said first and second grooves;

fifth and sixth grooves formed perpendicularly to the first and the second grooves;

an input terminal for ~~said~~ measuring formed by respectively connecting a first pair of pad electrodes disposed at positions between said first and third grooves with one of said pair of primary electrodes and said secondary electrodes; and

an output terminal for measuring formed by respectively connecting a second pair of pad electrodes disposed between said second and fourth grooves with the other of said pair of primary electrodes and said secondary electrodes.

6. (Original) The AT-cut crystal substrate as described in claim 5, wherein one of said piezoelectric resonators is obtained by dividing along said first, second, fifth, and sixth grooves.

7. (Currently Amended) An AT-cut crystal substrate for forming piezoelectric resonators, said AT-cut crystal substrate having first and second opposing surfaces, and comprising:

first and second ~~a pair of~~ primary electrodes disposed roughly on ~~at~~ the center of each respective opposing surface of said AT-cut crystal substrate;

first and second ~~a pair of~~ secondary electrodes~~, which are~~ formed on each respective opposing surface of said AT-cut crystal substrate in a shape surrounding each of said first and second primary electrodes and are electrically short-circuited by a lead electrode;

said first and second secondary electrodes connected to an electrical ground, ~~are grounded; wherein said secondary electrodes are grounded;~~ and

a pad electrode formed ~~in the middle of~~ roughly at the midpoint of the path of said lead electrode on one of first and second respective opposing surfaces ~~main surface~~ of said AT-cut crystal substrate,

wherein[[:]]

input measurement terminals ~~for measuring~~ are formed by one of said first and second ~~pair of~~ primary electrodes and said pad electrode[[;]], and

output measurement terminals ~~for measuring~~ are formed by another of said first and second ~~pair of~~ primary electrodes and said pad electrode.